

31. (Amended) An isolated nucleic acid molecule
encoding a human Fab molecule, comprising:

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(1)
a first nucleotide sequence encoding a [first polypeptide that is homologous to the] binding portion of a $\gamma 1$ heavy chain variable region (V_H) of [a] said human Fab molecule where said heavy chain variable region [that] exhibits immunological binding affinity for a hepatitis C virus (HCV) E2 antigen; and

3
a second nucleotide sequence encoding a [second polypeptide that is homologous to the] binding portion of a κ light chain variable region (V_L) of [a] said human Fab molecule where said light chain variable region [that] exhibits immunological binding affinity for a hepatitis C virus (HCV) E2 antigen.

32. (Amended) The nucleic acid molecule of claim 31, further comprising:

a third nucleotide sequence encoding a first leader sequence peptide, wherein said third nucleotide sequence is operably linked to the 5' terminus of the first nucleotide sequence and is capable of causing secretion of the [first polypeptide] encoded heavy chain variable region when the [first polypeptide] encoded heavy chain variable region and the first leader sequence peptide are expressed; and

a fourth nucleotide sequence encoding a second leader sequence peptide, wherein said fourth nucleotide sequence is operably linked to the 5' terminus of the second nucleotide sequence and is capable of causing secretion of the [second polypeptide] encoded light chain variable region when the [second polypeptide] encoded light chain variable region and the second leader sequence peptide are expressed.

34. (Twice Amended) The nucleic acid molecule of claim 31, wherein the first nucleotide sequence is [homologous to] encoded by the sequence depicted in Figure 4A (SEQ ID NO:22).

35. (Twice Amended) The nucleic acid molecule of claim 31, wherein the first nucleotide sequence is [homologous to] encoded by the sequence depicted in Figure 4B (SEQ ID NO:23).

36. (Twice Amended) The nucleic acid molecule of claim 31, wherein the first nucleotide sequence is [homologous to] encoded by the sequence depicted in Figure 4C (SEQ ID NO:24).

37. (Twice Amended) The nucleic acid molecule of claim 31, wherein the first nucleotide sequence is [homologous to] encoded by the sequence depicted in Figure 4D (SEQ ID NO:25).

38. (Twice Amended) The nucleic acid molecule of claim 31, wherein the first nucleotide sequence is [homologous to] encoded by the sequence depicted in Figure 4E (SEQ ID NO:19).

39. (Twice Amended) The nucleic acid molecule of claim 31, wherein the first nucleotide sequence is [homologous to] encoded by the sequence depicted in Figure 4F (SEQ ID NO:26).

40. (Twice Amended) The nucleic acid molecule of claim 31, wherein the first nucleotide sequence is [homologous to] encoded by the sequence depicted in Figure 4G (SEQ ID NO:27).

32
41. (Twice Amended) The nucleic acid molecule of claim 31, wherein the second nucleotide sequence is [homologous to] encoded by the sequence depicted in Figure 3A (SEQ ID NO:15).

42. (Twice Amended) The nucleic acid molecule of claim 31, wherein the second nucleotide sequence is [homologous to] encoded by the sequence depicted in Figure 3B (SEQ ID NO:16).

43. (Twice Amended) The nucleic acid molecule of claim 31, wherein the second nucleotide sequence is [homologous to] encoded by the sequence depicted in Figure 3C (SEQ ID NO:17).

44. (Twice Amended) The nucleic acid molecule of claim 31, wherein the second nucleotide sequence is [homologous to] encoded by the sequence depicted in Figure 3D (SEQ ID NO:18).

45. (Twice Amended) The nucleic acid molecule of claim 31, wherein the second nucleotide sequence is [homologous to] encoded by the sequence depicted in Figure 3E (SEQ ID NO:19).

46. (Twice Amended) The nucleic acid molecule of claim 31, wherein the second nucleotide sequence is

[homologous to] encoded by the sequence depicted in Figure 3F (SEQ ID NO:20).

32
47. (Twice Amended) The nucleic acid molecule of claim 31, wherein the second nucleotide sequence is [homologous to] encoded by the sequence depicted in Figure 3G (SEQ ID NO:21).

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48. (Amended) An isolated nucleic acid molecule, comprising a first nucleotide sequence encoding a [first polypeptide that is homologous to the] binding portion of a $\gamma 1$ heavy chain variable region (V_H) of a human Fab molecule obtained from a combinatorial library, wherein said Fab molecule exhibits immunological binding affinity for a hepatitis C virus (HCV) E2 antigen.

49. (Twice Amended) The nucleic acid molecule of claim 48, wherein the first nucleotide sequence is [homologous to] encoded by the sequence depicted in Figure 4A (SEQ ID NO:22).

50. (Twice Amended) The nucleic acid molecule of claim 48, wherein the first nucleotide sequence is [homologous to] encoded by the sequence depicted in Figure 4B (SEQ ID NO:23).

51. (Twice Amended) The nucleic acid molecule of claim 48, wherein the first nucleotide sequence is [homologous to] encoded by the sequence depicted in Figure 4C (SEQ ID NO:24).

52. (Twice Amended) The nucleic acid molecule of claim 48, wherein the first nucleotide sequence is [homologous to] encoded by the sequence depicted in Figure 4D (SEQ ID NO:25).

53. (Twice Amended) The nucleic acid molecule of claim 48, wherein the first nucleotide sequence is [homologous to] encoded by the sequence depicted in Figure 4E (SEQ ID NO:19).

54. (Twice Amended) The nucleic acid molecule of claim 48, wherein the first nucleotide sequence is [homologous to] encoded by the sequence depicted in Figure 4F (SEQ ID NO:26).

55. (Twice Amended) The nucleic acid molecule of claim 48, wherein the first nucleotide sequence is [homologous to] encoded by the sequence depicted in Figure 4G (SEQ ID NO:27).

56. (Amended) An isolated nucleic acid molecule, comprising a first nucleotide sequence encoding a [first polypeptide that is homologous to the] binding portion of a κ light chain variable region (V_L) of a human Fab molecule obtained from a combinatorial library, wherein said Fab molecule exhibits immunological binding affinity for a hepatitis C virus (HCV) E2 antigen.

57. (Twice Amended) The nucleic acid molecule of claim 56, wherein the second nucleotide sequence is [homologous to] encoded by the sequence depicted in Figure 3A (SEQ ID NO:15).

58. (Twice Amended) The nucleic acid molecule of claim 56, wherein the second nucleotide sequence is [homologous to] encoded by the sequence depicted in Figure 3B (SEQ ID NO:16).

59. (Twice Amended) The nucleic acid molecule of claim 56, wherein the second nucleotide sequence is [homologous to] encoded by the sequence depicted in Figure 3C (SEQ ID NO:17).

60. (Twice Amended) The nucleic acid molecule of claim 56, wherein the second nucleotide sequence is [homologous to] encoded by the sequence depicted in Figure 3D (SEQ ID NO:18).

61. (Twice Amended) The nucleic acid molecule of claim 56, wherein the second nucleotide sequence is [homologous to] encoded by the sequence depicted in Figure 3E (SEQ ID NO:19).

62. (Twice Amended) The nucleic acid molecule of claim 56, wherein the second nucleotide sequence is [homologous to] encoded by the sequence depicted in Figure 3F (SEQ ID NO:20).

63. (Twice Amended) The nucleic acid molecule of claim 56, wherein the second nucleotide sequence is [homologous to] encoded by the sequence depicted in Figure 3G (SEQ ID NO:21).

80. (Amended) A method of producing a recombinant polypeptide having [an amino acid sequence homologous to

the] a binding portion of a $\gamma 1$ heavy chain variable region (V_H) of a human Fab molecule, comprising:

- (a) providing a population of transformed host cells according to claim 77; and
- (b) expressing said recombinant polypeptide from the expression vector.

81. (Amended) A method of producing a recombinant polypeptide having [an amino acid sequence homologous to the] a binding portion of a κ light chain variable region (V_L) of a human Fab molecule, comprising:

- (a) providing a population of transformed host cells according to claim 78; and
- (b) expressing said recombinant polypeptide from the expression vector.

REMARKS

1. Introductory Comments

The Examiner has rejected claims 31-81 under 35 U.S.C. §112, second paragraph, asserting that the claims are indefinite.

The Examiner has rejected claims 31-63, under 35 U.S.C. §103, asserting that the claims are unpatentable over Mehta.

The Examiner has rejected claims 31-81, under 35 U.S.C. §103, asserting that the claims are unpatentable over Wong and Mehta, in view of Hoogenboom and Chanock.

These rejections are believed to be overcome in part by the amendments and are otherwise traversed for reasons discussed below.

Claims 31-81 are pending.